AF/3617

4386.77661 PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Akira Kuramori
Serial No.:	10/529,495
Conf. No.:	9156
Filed:	3/29/2005
For:	TIRE/WHEEL ASSEMBLY
Art Unit:	3617
Examiner:	Stormer, Russell D.

I hereby certify that this paper is being deposited with the United States Postal Service as FIRST-CLASS mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this date.

18 Oct 07

Date *Registration No. 29,367*
Attorney for Applicant(s)

APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. § 1.192

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Date: October 18, 2007

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Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Appeal Brief is in support of Applicants' Notice of Appeal dated July 24, 2007 from the Final Rejection dated April 24, 2007.

REAL PARTY IN INTEREST

The real party in interest in this case is The Yokohama Rubber Co., Ltd., 36-11, Shimbashi 5-chome, Minato-ku, Tokyo 105-8685 Japan.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences related to this application.

STATUS OF CLAIMS

Claims 1-3 and 5-14 are pending. Claims 1, 9, 13 and 14 stand rejected, and claims 2, 3, 5-8 and 10-12 have been withdrawn.

STATUS OF AMENDMENTS

Amendment A, filed on March 6, 2007, was the last amendment filed. All amendments have been entered and considered. No amendments were filed subsequent to the final rejection mailed April 24, 2007.

SUMMARY OF CLAIMED SUBJECT MATTER

Claims 1 and 9 are independent. Referring to independent claim 1, a tire/wheel assembly contains a run-flat support 3 (page 7, line 25) (Fig. 1) inserted into a cavity section

of a pneumatic tire 2 (page 7, line 25) (Fig. 1) coaxially with a rim 1 (page 7, line 24) (Fig. 1). An outer peripheral surface of the run-flat support 3 (page 7, line 25) (Fig. 1) is coated with a resin layer 8 (page 2, line 2) (Fig. 3), and microcapsules 9 (page 10, line 4) (Fig. 3) containing a lubricant are mixed in the resin layer 8 (page 10, line 4) (Fig. 3).

In claim 9, a run-flat support 3 (page 7, line 25) (Fig. 1) inserted into a cavity section of a pneumatic tire 2 (page 7, line 25) (Fig. 1) coaxially with a rim 1 (page 7, line 24) (Fig. 1) includes an outer peripheral surface coated with a resin layer 8 (page 10, line 4) (Fig. 3). Additionally, microcapsules 9 (page 10, line 4) (Fig. 3) containing a lubricant are mixed in the resin layer 8 (page 10, line 4) (Fig. 3).

New claim 13, the tire/wheel assembly of claim 1 is configured so the resin layer 8 (page 9, line 2) (Fig. 3) has at least two convex portions 4a 4b (page 8, line 6) (Fig. 1).

New claim 14, the run-flat support 3 (page 7, line 24) (Fig. 1) of claim 9 is configured so the resin layer 8 (page 9, line 2) (Fig. 3) has at least two convex portions 4a 4b (page 8, line 6) (Fig. 1).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1, 9, 13 and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gerloff et al. (USPN 4,694,873) in view of Peterson et al. (USPN 3,809,442). The rejections of independent claims 1 and 9 are to be reviewed on appeal.

ARGUMENT

The present invention improves the performance of run-flat supports for tire/wheel assemblies. The improvement is accomplished by coating the support with a resin layer with microcapsules containing a lubricant mixed in the resin layer.

The examiner concedes that the present invention is novel, but rejected the claims on the basis of a combination of Gerloff et al. USPN 4,694,873 and Peterson et al. USPN 3,809,442. Gerloff describes a vehicle wheel with a run-flat support, but Peterson describes a suspension and driving system for use on moving belts such as snowmobile tracks and conveyor belts.

The issue on this appeal is whether it is appropriate to combine Peterson with Gerloff. This brief will show that it is inappropriate to combine Peterson with Gerloff because (1) there is no motivation, suggestion or other reason to combine the references, and (2) Peterson is not analogous.

A rigid application of the so-called "teaching/suggestion/motivation" test was rejected in *KSR Int'l. Co. v. Teleflex, Inc.*, 82 USPQ2d 1385 (2007), but the test was not discarded. The Court simply required consideration of the general knowledge of those skilled in the art, and other factors, using a common sense approach to obviousness.

There is no explicit or implicit suggestion or motivation to combine the references in the present case, and there is no other reason to combine them, either. The detailed workings of a snowmobile are not generally known to designers in the tire/wheel industry, and even their general knowledge as consumers would not include lubricant

applications in snowmobiles. Thus, "common sense" leads to the conclusion that a designer of the present invention, i.e., run flat supports for tire/wheel assemblies, would not be aware of suspension and driving systems for use on moving belts such as snowmobiles tracks and conveyor belts, including lubricants used in the belts. Moreover, that designer would have no inclination to look for solutions to problems with tire/wheel assemblies in snowmobile belts. For this reason alone, it is inappropriate to combine Peterson with Gerloff.

Moreover, it is inappropriate to combine Peterson with Gerloff because Peterson is not analogous art. M.P.E.P. 2141.01(a) states with respect to nonanalogous prior art that a reference must be either in a field of Applicant's endeavor or, if not, then reasonably pertinent to the particular problem of which the inventor was concerned, citing *In re Oetiker, 977F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).*

Peterson is not in Applicant's field of endeavor, namely pneumatic vehicle wheels having a run-flat support. Peterson is in the unrelated field of slide rails for snowmobiles. This is recognized by the Office. Gerloff is classified in international classes B60C 17/04 and B50B 21/12, and Peterson is classified in international classes B62m 27/02 and B62d 55/24. Gerloff's U.S. classifications are 152/380 and 152/DIG. 20, and Peterson's U.S. classifications are 305/14, 252/12, 308/238, 305/35 EB, and 305/14. Accordingly, both the U.S. and international classes are completely different in Gerloff and Peterson. Additionally, the field of search for Gerloff does not overlap the

field of search for Peterson, as seen on the faces of the references. For all these reasons, Applicants submit that Peterson is not in Applicants' field of endeavor.

Peterson is also not reasonably pertinent to the particular problem with which the inventor of the present invention was concerned. An object of the present invention is to provide a tire/wheel assembly having a run-flat durability further enhanced with microcapsules in a resin layer coating on a run-flat support. In particular, one object is to have a tire/wheel assembly having a run-flat support inserted into a cavity section of a pneumatic tire such that an inner peripheral surface of the pneumatic tire engages an outer peripheral surface of a run-flat body with reduced friction upon occurrence of a flat tire (see Applicants' specification paragraphs [0005] and [0007]). In the structure of the present invention, the inner surface of the pneumatic tire engages a run-flat body that is coated with a resin layer having microcapsules which burst when the tire is flat. Upon wear of the resin layer due to continued driving on the flat tire, the microcapsules release a lubricant, which reduces the wear of the resin layer and the inner surface of the tire. Accordingly, damage to the tire can be reduced (see Applicants' specification paragraphs [0008] and [0032]).

In contrast, Peterson is directed to a suspension and driving system for use on moving belts such as snowmobile tracks and conveyor belts (see Peterson, Abstract). Peterson seeks to overcome the problem of mounting systems that use side rails, which support a drive track and maintain contact between the ground and the driving track. In particular, Peterson is concerned with operation of the driving track when the

snowmobile is crossing dry spots in terrain (see Peterson, Col. 3, lines 24-39). Under these conditions, cooling normally furnished by melted snow or ice is absent, and increased friction occurs due to heat buildup (see Peterson, Col. 3, lines 24-29). Peterson is concerned with a side rail 18 that fits into an elongated strip 21 (see Peterson, Col. 3, lines 53-55 and Fig. 1). Peterson is silent regarding a tire/wheel assembly or run-flat support for a pneumatic tire, or problems associated with a pneumatic tire when it becomes flat and is continued to be driven upon.

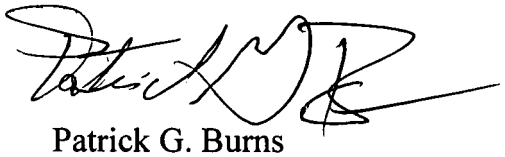
Since Peterson is not pertinent to the problems of the present invention or in Applicants' field of endeavor, Applicants respectfully request removal of Peterson as nonanalogous prior art.

CONCLUSION

For the foregoing reasons, applicants respectfully request that the rejection of claims 1, 9, 13 and 14 be reversed, with instructions to allow this application on cancellation of the withdrawn claims.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

By 

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CLAIMS APPENDIX

1. (Previously Presented) A tire/wheel assembly having a run-flat support inserted into a cavity section of a pneumatic tire coaxially with a rim, wherein

an outer peripheral surface of the run-flat support is coated with a resin layer, and

microcapsules containing a lubricant are mixed in the resin layer.

2. (Withdrawn) A tire/wheel assembly having a run-flat support inserted into a cavity section of a pneumatic tire coaxially with a rim, wherein

at least a region of an inner peripheral surface of the pneumatic tire facing an outer peripheral surface of the run-flat support is coated with a resin layer.

3. (Withdrawn) The tire/wheel assembly according to claim 1, wherein

the run-flat support has a structure in which elastic rings are attached to end portions of open legs of an annular shell opened in a fork-shape.

4. (Canceled)

5. (Withdrawn) A tire/wheel assembly having a run-flat support inserted into a cavity section of a pneumatic tire coaxially with a rim, wherein

a cover plate rotatable in a circumferential direction is provided on an outer peripheral surface of the run-flat support.

6. (Withdrawn) The tire/wheel assembly according to claim 5, wherein

a lubricant and/or a bearing mechanism is interposed between the run-flat support and the cover plate.

7. (Withdrawn) The tire/wheel assembly according to claim 5, wherein

the run-flat support has a structure in which elastic rings are attached to end portions of open legs of an annular shell opened in a fork-shape.

8. (Withdrawn) The tire/wheel assembly according to claim 5, wherein

the cover plate is made of resin.

9. (Previously Presented) A run-flat support inserted into a cavity section of a pneumatic tire coaxially with a rim, wherein

the run-flat support has an outer peripheral surface coated with a resin layer, and

microcapsules containing a lubricant are mixed in the resin layer.

10. (Withdrawn) A run-flat support inserted into a cavity section of a pneumatic tire coaxially with a rim, wherein

the run-flat support has an outer peripheral surface on which a cover plate is arranged to be rotatable in a circumferential direction.

11. (Withdrawn) The tire/wheel assembly according to claim 2, wherein

the run-flat support has a structure in each elastic rings are attached to end portions of open legs of an annular shell opened in a fork-shape.

12. (Withdrawn) The tire/wheel assembly according to claim 2, wherein microcapsules containing a lubricant are mixed in the resin layer.

13. (Previously Presented) The tire/wheel assembly according to claim 1, wherein said resin layer has at least two convex portions.

14. (Previously Presented) The run-flat support according to claim 9, wherein said resin layer has at least two convex portions.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.